The neutrophil lymphocyte ratio may be useful ınflammatory ındicator before applying other expensive and ınvasive procedures

Sir,

We read the article "Neutrophil-to-lymphocyte ratio (N/L ratio), insulin resistance (IR), and endothelial dysfunction (ED) in patients with autosomal dominant polycystic kidney disease (ADPKD)" by Turkmen *et al*.[1] They aimed to determine the relationship between N/L ratio and IR, coronary flow velocity reserve, carotid intima-media thickness, and the left ventricular mass index (LVMI) in normotensive ADPKD patients. They concluded that N/L ratio showed positive correlation with high-density lipoprotien cholesterol level and inverse correlation with LVMI and albumin level. Also N/L ratio that was found to be increased in patients with ADPKD may be a readily available marker of inflammation and ED.

Inflammation plays a major role in the pathogenesis of atherosclerosis that leads to cardiovascular complication in renal disease. Complete blood counts are an easy, inexpensive, routine examination technique that give us information about the blood contents; the red and 1white cells, the platelets, the count and dimensions of subgroups of cells including red cell distribution width, platelet distribution width and parameters like the platelet lymphocyte ratio, N/L ratio. Moreover, N/L ratio was introduced as a potential marker to determine inflammation in cardiac and non-cardiac disorders.[2] Elevated N/L ratio is also a predictor of long-term mortality rather than just a marker of an acute medical condition. Because uncontrolled hypertension, anemia, metabolic syndrome,[3] known malignancy, local or systemic infection, previous history of infection (<3 months), inflammatory diseases, hyperparathyroidism and any medication that related to inflammatory condition of patients, N/L ratio may be affected in all of above conditions. For these reasons, it would be better, if the authors had mentioned these factors.

Furthermore, the level of kidney disease can be related to the inflammator condition of patients with ADPKD. In this perspective, the authors used Cockcroft-Gault (CG) equation for glomerular filtration rate (GFR). However, CG equation may measure lower GFR in younger age groups comparison with the modification of diet in renal disease (MDRD) formula, but it can measure higher GFR in older individuals compare to MDRD formula.[4] Although the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) recently published an equation for GFR using the same variables (serum creatinine level, age, sex, and race) as the MDRD Formula, the CKD-EPI equation more accurately categorized individuals with respect to long-term clinical risk compared with the MDRD formula.[5]

Finally, not only N/L ratio, but also platelet-lymphocyte ratio, red cell distribution width, platelet distribution width, plateletcrit, mean platelet volume, uric acid and a gamma-glutamyl transferase are easy methods to evaluate the ADPKD patients before applying other expensive and invasive procedures. These markers might be beneficial in clinical practice.[2] In conclusion, we hardly believe that those findings obtained from the current study will lead to further large-scale studies examining the relationship between N/L ratio and ADPKD subjects. However, one should keep in mind that N/L ratio itself alone without other inflammatory markers may not give completely information to clinicians about the endothelial inflammatory condition of the patient. So, we think that it should be evaluated together with other serum inflammatory markers.

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References

1. Turkmen K, Tufan F, Selçuk E, Akpınar T, Oflaz H, Ecder T. Neutrophil-to-lymphocyte ratio, insulin resistance, and endothelial dysfunction in patients with autosomal dominant polycystic kidney disease. Indian J Nephrol 2013;23:34-40.
2. Balta S, Demirkol S, Celik T, Kucuk U, Unlu M, Arslan Z, *et al*. Association Between Coronary Artery Ectasia and Neutrophil-Lymphocyte Ratio. Angiology 2013 Mar 7. [Epub ahead of print].

3. Balta S, Cakar M, Demirkol S, Arslan Z, Akhan M. Higher Neutrophil to Lymhocyte Ratio in Patients With Metabolic Syndrome. Clin Appl Thromb Hemost 2013 Jan 23.[Epub ahead of print].
4. Balta S, Cakar M, Demirkol S, Balta I, Kurt O. Re: Effect of renin-angiotensin-aldosterone system blockade therapy on incidence of contrast-induced nephropathy in patients with chronic kidney disease. Iran J Kidney Dis 2013;7:166-7.
5. Matsushita K, Selvin E, Bash LD, Astor BC, Coresh J. Risk implications of the new CKD Epidemiology Collaboration (CKD-EPI) equation compared with the MDRD Study equation for estimated GFR: The Atherosclerosis Risk in Communities (ARIC) Study. Am J Kidney Dis 2010;55:648-59.

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